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AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, listings, of claims in the application:

Listing of Claims:

Claims 1-18 (cancelled)

19. (New): An electrical transformer comprising:

a coil comprising:

a plurality of layers disposed around a central axis, one or more of said layers being conductive and one or more of said layers being insulating;

a plurality of cooling ducts disposed between the layers, each of said cooling ducts having an interior passage and being comprised of a first resin; and

a second resin encapsulating the layers, said second resin being different than the first resin.

20. (New): The electrical transformer of claim 19, wherein the coil has an open core.

21. (New): The electrical transformer of claim 20, wherein the coil is cylindrical.

22. (New): The electrical transformer of claim 19, wherein in each of the cooling ducts, fiberglass filaments reinforce the first resin.

23. (New): The electrical transformer of claim 22, wherein the second resin is an epoxy resin.

24. (New): The electrical transformer of claim 23, wherein each of the cooling

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ducts is formed by pultrusion.

25. (New): The electrical transformer of claim 24, wherein the first resin is a polyester resin.

26. (New): The electrical transformer of claim 19, wherein the layers comprise a plurality of conductive layers and a plurality of insulating layers, and wherein the conductive layers are formed from a length of conductive sheet material and the insulating layers are formed from a length of insulating sheet material.

27. (New): An electrical transformer comprising:
a coil formed by a method comprising:

 providing a plurality of rigid pre-formed cooling ducts, each of said pre-formed cooling ducts having an enclosed periphery with open ends and an interior passage and being comprised of a first resin reinforced with fiberglass;

 providing a length of conductive material and a length of insulating material;

 winding the lengths of conductive material and insulating material around a central axis to form a plurality of layers comprising insulating and conductive layers;

 during the winding, positioning the pre-formed cooling ducts so as to be disposed between the layers; and

 encapsulating the layers in a second resin.

28. (New): The electrical transformer of claim 27, wherein each of the cooling ducts has a length that is shorter than an overall length of the coil.

29. (New): The electrical transformer of claim 27, wherein each of the cooling

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ducts has an elliptical cross-section.

30. (New): The electrical transformer of claim 27, wherein the first and second resins are different.

31. (New) The electrical transformer of claim 30, wherein the second resin is an epoxy resin.

32. (New): The electrical transformer of claim 31, wherein the first resin is not an epoxy resin.

33. (New): The electrical transformer of claim 32, wherein each of the cooling ducts is formed by pultrusion.

34. (New): The electrical transformer of claim 33, wherein the first resin is a polyester resin.

35. (New): A coil for an electrical transformer, said coil comprising:
a plurality of layers disposed around a central axis, one or more of said layers being conductive and one or more of said layers being insulating;
a plurality of cooling ducts disposed between the layers, each of said cooling ducts having an interior passage and being comprised of a first resin; and,
a second resin encapsulating the layers, said second resin being different than the first resin.

36. (New): The coil of claim 35, wherein the second resin is an epoxy resin.

37. (New): The coil of claim 36, wherein the first resin is not an epoxy resin and

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is reinforced with fiberglass.

38. (New): The coil of claim 37, wherein each of the cooling ducts is formed by pultrusion.

39. (New): The coil of claim 38, wherein the first resin is a polyester resin.

40. (New): The coil of claim 36, wherein the layers comprise a plurality of conductive layers and a plurality of insulating layers, and wherein the conductive layers are formed from a length of conductive sheet material and the insulating layers are formed from a length of insulating sheet material.